



Recreational Functions of Botanical Gardens And Examining Sample of Nezahat Gökyiğit Botanical Garden

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Abstract:

Botanic gardens are a special category of garden, distinctive for their scientific basis, play an important role in bringing together people and plants, providing inspirational planting for people, commitment to plant conservation. They have basically scientific, educational and recreational functions. These functions of botanical gardens varies from country to country as well as within countries too.

In this study we revealed the functions of botanical gardens, classified the 30 different botanical gardens according to their functions in the world and examined the Nezahat Gökyiğit Botanical Garden's recreational functions. We conducted a face-to-face survey with 204 people. In this survey we revealed the users' expectations, spatial preferences and intended purpose in Nezahat Gökyiğit Botanical Garden. According to results of survey, the first activity choice of the botanic garden's visitors was to get away from busy city and stress, to be informed about plants and to get breath of fresh air. Understanding how people perceive and use the botanical gardens of Turkey is important to inform future research and strategies.

Introduction:

There are different definitions about botanic gardens. According to Kuzenanov and Sizykh (2006) botanic gardens are innovative institutions that can help local people in many ways via the introduction of new economically valuable plant species, a creation of friendly and secure environment, an improvement and beautification of settlements, a city greening, a restoration and a repatriation of rare plants, the "horticultural therapy," a continuous education and public awareness, etc.

Botanical gardens are living plants museums where a combination of herbaceous and woody plants can be observed, endangered plant species are protected and promoted, with the help of research on plants visitors can be trained directly or indirectly, recreational activities are offered for the public (Var 2013).

Botanic gardens are a special category of garden, distinctive for their scientific basis, inspirational planting, commitment to plant conservation and involvement in environmental education (Oldfield 2007).

The Botanic Gardens Conservation International (BGCI) defines gardens as "institutions holding documented collections of living plants for the purposes of scientific research, conservation, display and

education" (Wyse Jackson and Sutherland 2000).

Botanical gardens with beautiful landscape are ideal places for recreation. There are always so many kinds of flowers blooming almost over the whole year; people can see various interesting, strange and rare species in gardens (Var 2013).

The first true botanic garden was established in Italy in 1543, at the University of Pisa, and laid out by Luca Ghini. The Universities of Florence and Padua soon followed the example set at Pisa and created their own garden in 1545. Rome established its garden in around 1566 and Bologna in 1567. Leiden founded in 1587 and Oxford botanic gardens finished in 1633 (Oldfield 2007).

First botanical garden in Turkey was founded in 1703, 310 years before today. It is known that the garden was established by English Consul General William Sherard in an area of 3.7 hectare. However, this garden cannot survive until today. Then İstanbul University Botanic garden was established in 1936, Ege University Botanic Garden and Herbarium Center in 1964, Çankaya Botanic Garden in 1970, Anatolia Botanic Garden in 1994, Adalya Mediterranean Botanic bahçesi in 1995, Soğanlı Botanic Park in 1998, Nezahat Gökyiğit Botanic

Garden in 2003 and Ata Botanic Garden in 2006.

Botanic gardens have a special environmental, scientific, cultural, aesthetic, and recreational importance (Kuzenkov and Sizykh 2006). Botanic gardens play important roles in education as well as in conservation of plant and natural resources and in scientific research. They are also regarded as excellent sites for recreation: millions of visitors annually are attracted to botanic gardens by their plants, theme gardens and greenhouses (IUCN 1987; Chang et al. 2008). Public gardens, parks and botanic gardens attract a substantial number of domestic and international visitors throughout the world (Connell and Meyer 2004), with Botanic Gardens Conservation International estimating that internationally, visits to botanic gardens and arboreta number approximately 250 million per year (Ballantyne et al. 2008).

Botanic gardens have basically scientific, educational and recreational functions. In this study, we focus on its recreational functions. The objective of this study was to determine users' expectations, spatial preferences and reasons for visiting the Nezahat Gökyiğit Botanical Garden.

Materials and Methods:

In this study we revealed the functions of botanical gardens, classified the 30 different botanical gardens according to their functions in the world and examined the Nezahat Gökyiğit Botanical Garden's recreational functions. Investigated these botanic gardens classified in to three groups according to priority of functions.

This study was conducted Nezahat Gökyiğit Botanic garden was established in 2003 in Istanbul, Turkey. Its total area is 50 hectares but usable area is 37 hectares. The garden consisted of seven islands but two of them

were not open to visiting. The garden fulfill recreational functions such as picnic areas, playground areas, amphitheatre, lakeside sitting areas and viewpoints etc., as well as conservational and research functions.

Questionnaire was used to explore the users' expectations, spatial preferences and visiting purposes. We conducted a face-to-face survey with 204 respondent. Questionnaire was conducted both weekdays and at weekends. In survey, we were asked to respondents which months they prefer to visit garden, who they usually prefer to visit with, how they informed about garden, visiting frequency, visiting purposes, spatial preferences, facilities of botanic garden and expectations from garden as well as demographic factors (age, education and profession).

Result and Discussion:

30 botanic gardens classified in to three groups according to priority of functions (Table 1).

According to the survey results, the composition of the respondents was 77,1% females and 22,1% males. For education level, uneducated was 0,5%, 1% primary school, 3,9% secondary school, 23,5% high school, 59,8% university and 11,3% post graduate. 19,3% of the respondents was unemployed or housewife, 25,5% civil servant, 10,4% worker, 10,3% retired, 21,1% student and 13,4% other professions.

When they were asked which months they prefer to visit garden, 77,3% of the respondents state that they prefer spring, 4,9% summer, 9,3% autumn, 8,3% all and nobody prefer winter (Figure 1) However, in their study Chen et. al., (2009) found that the majority of the respondents preferred to visit the garden in the spring (43.7%) and autumn (38.7%) and in the winter (11.7%) and summer (5.9%).

Table 1. Classified botanic gardens according to its priority functions.

	Botanic Garden	Country
GROUP I Recreation +Conservation+Research For the third group botanical gardens, recreational activities are more important. They are surely open to researches and preservation. But, there is a probability that all needs of visitors may not be fulfilled. Some of them have no entrance fees, no information, even no glasshouses which are the pretigious places of botanical gardens. Most of them don't have any units for research.	Helsinki	Finland
	Shangai	China
	Beijing	China
	South China (Guangzhou)	China
	Hantaek (Seoul)	S.Korea
	Sao Paulo	Bresil
	Ata	Turkey
	Taşkent	Ozbekistan
GROUP II Conservation+Recreation +Research In the second group botanical gardens, ex-situ protection purposes are as important as recreational activities. Researches can be done in accordance with demands. Conservation and recreation is in balance in here. However, sometimes recreation may be more dominant. In that case, visitors coming from urban areas use the botanical garden as a park. Although picnic, uncontrolled eating / drinking, plays on the grass is not allowed; reaching to the plant collections by walking on the grass is permitted.	Hamburg	Germany
	Frankfurt	Germany
	Stuttgart	Germany
	Munchen	Germany
	Barcelona	Spain
	Osaka	Japan
	Kyoto	Japan
	Okayama	Japan
	Xiamen	China
	Nezahat Gökyiğit	Turkey
	Batumi	Georgia
	Stockholm	Swiden
	Kew Bot.G	England
GROUP-III Research+Conservation+Recreation The first group of botanical gardens are mostly used for scientific and conservative purposes. Instead of that, some recreational activities can also be found surely. These kind of botanical gardens contain and offer the highest level of visitors' wishes in their bodies.	Edinburgh	England
	Berlin	Germany
	Singapore	Singapore
	Hiroshima	Japan
	Zurich	Switzerland
	Wien	Austria
	Amstredam	Nedherland
	Fuji Bamboo G.	Japan
	Copenhagen	Denmark

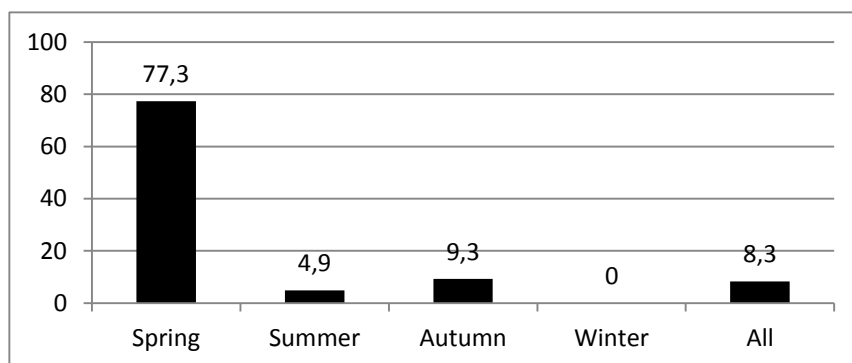


Figure 1. Preferred visiting seasons of repondent's

Benet ve Swasey (1996) found that of the 156 urban respondents 22,5% visited alone, 41% visited with friends and 34% visited with family. Crilley (2008) found that in his study the majority of respondents visited the gardens with a partner or spouse, family, or with

friends but few with children. Crilley et.al. (2010) indicate that most of the visitors came to the garden with family and/or friends (45%), with a partner or spouse (36%), or alone (11%).

In our study we found similar results. Most of the respondents came to garden with family

(52%), friends (34,3%) or alone (11,3) (Figure 2).

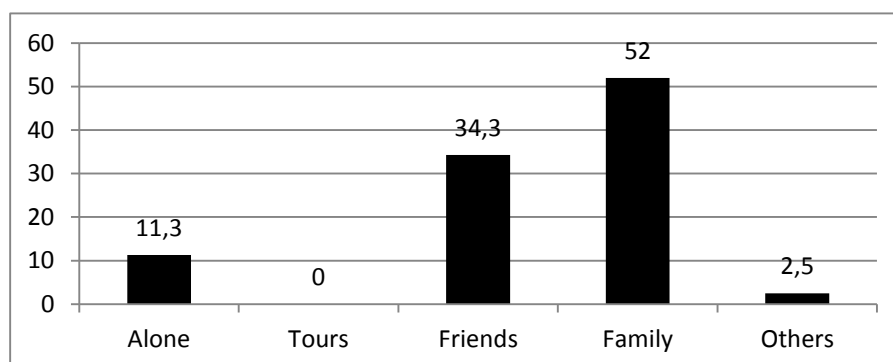


Figure 2. Respondents' preferences to visiting botanic garden with

When they were asked how they informed about garden most of the respondents informed from word of mouth, 12,7% from internet, 2,5% from newspapers or magazines,

1 % from TV programmes (Figure 3), while Connell (2004) found that word of mouth was %34,9.

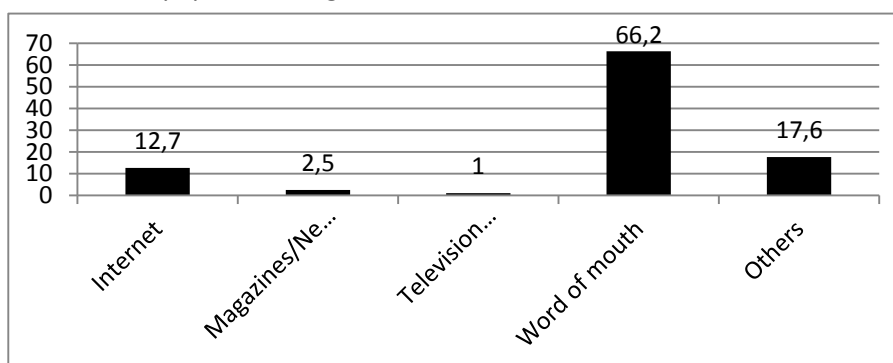


Figure 3. How respondents informed about botanic garden

In our study we found that most of the respondents visited the garden a few times a year (39,2%), rarely and once a week (14,7%), once a month (14,2%) and once a year (7,4%) (Figure 4), while Ward et al. (2010) found that

people surveyed generally visited the gardens infrequently with 30% of the users visiting a few times a year and 20% visiting for the first time.

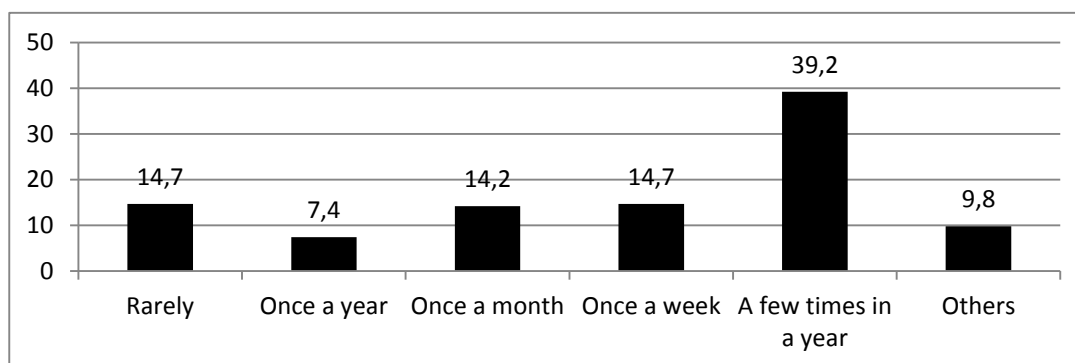


Figure 4. Visiting frequency of respondents'

When we asked to respondents why they visit the garden, we obtained similar results to

previous studies as well as differences. The first activity choice of the botanic garden's

visitors was to get away from busy city and stress (29,4%), to be informed about plants (15,7%) and to get breath of fresh air (15,7%) (Figure 5). For example, Crilley and Price (2006) indicated that first activity choice of respondents in botanic gardens was relax/read (26%), view plants (19%) and family outing (11%). Chen et al. (2009) found that 70.2% of the respondents stated that they use the garden for relaxation purposes, 7.8% special events, 1.3% picnic, 7.1% reflection, 2.6%

exercise, 5.4% time with friends, 2.4% enjoyment of nature, and 3.2% other activities. Crilley et. al., (2010) found that the first activity choice of the botanic garden's visitors was to view plants (37%), to exercise (17%), or to take part in a family outing (10%). Ward et al. (2010) found that activities such as enjoyment of the garden's natural beauty, exercise and get abreath of fresh air were the primary reasons given for using the gardens.

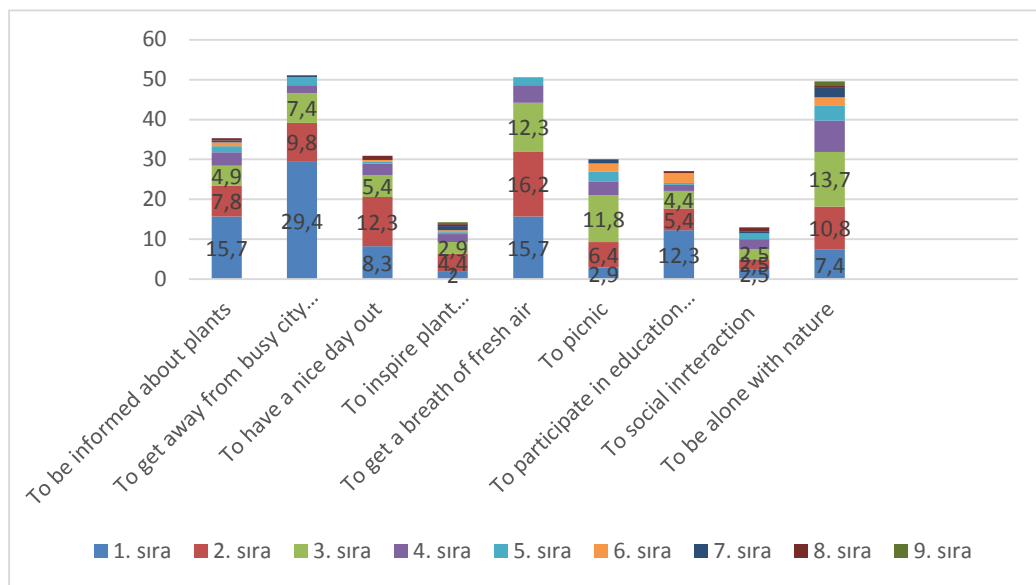


Figure 5. Respondents' visiting purposes to botanic garden

When they were asked which spaces they interested in garden, most of the respondents intereseted in walking areas/ view points (37,7

%), promenade island (14,7 %) and center island (13,7 %) (Figure 6).

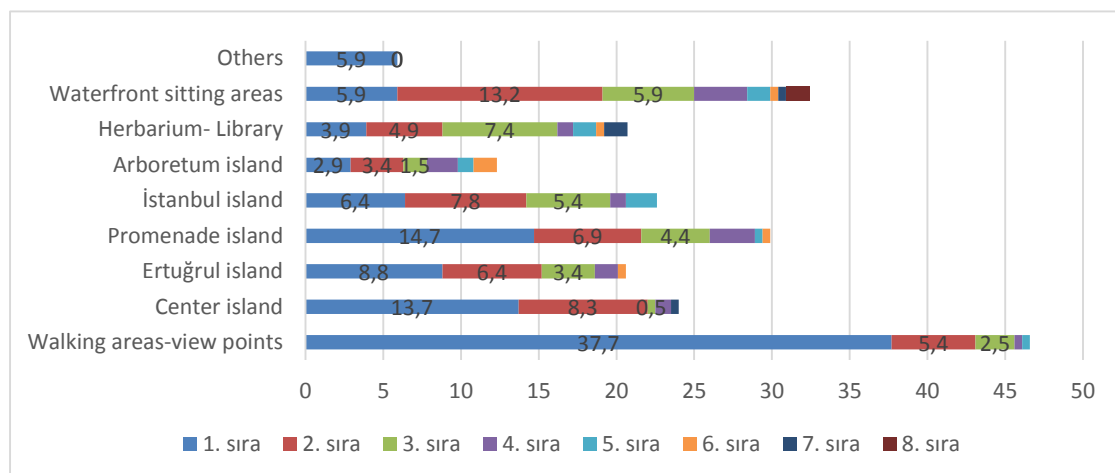


Figure 6. Respondents' most interested spaces in botanic garden

When they were asked what they think about efficiency of garden' facilities, we found that 49 % of respondents think that facilities were

enough, 32,4% not enough and 18% partially enough (Figure 7).

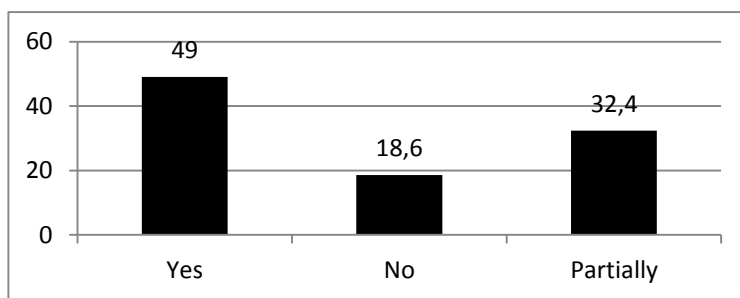


Figure 7. The adequacy of facilities of botanic garden

When respondents were asked which facilities should be done in garden, 26,5% of respondents stated that cafe/restaurant should be done, 14,2% gift shops and plant sales, 4,9%

suitable areas fo wedding, concert, festival activities etc., 3,9% car park and 2% toilets (Figure 8).

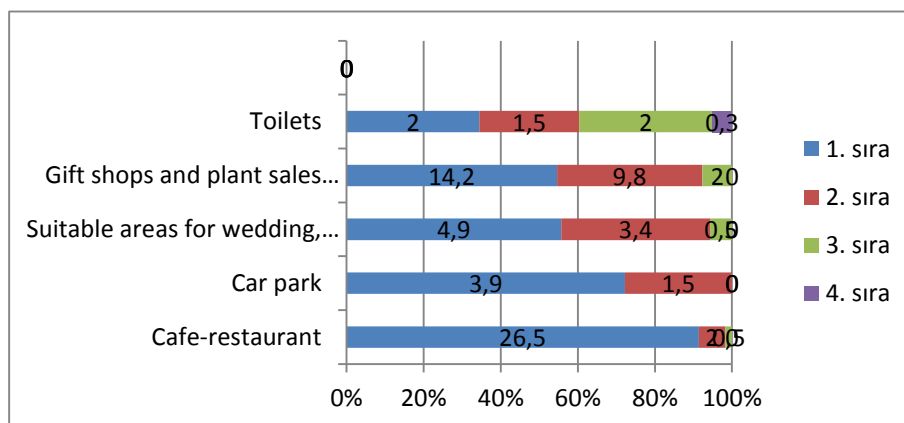


Figure 8. Respondents' ideas about which facilities should be done in botanic garden

Conclusions:

Botanic gardens are a vital component of the urban green space system. Botanic gardens as a green spaces serve important recreational, psychological and aesthetic functions. As a result of rapid urbanization due to population increase, urban green spaces decreases and building areas increases. As people who have a stressful work life and trapped between concrete blocks, their needs increasing for green areas. As seen in our study the first activity choice of the botanic garden's visitors was to get away from busy city and stress, to be informed about plants and to get breath of fresh air. Understanding how people perceive and use the botanical gardens of Turkey is important to inform future research and design strategies (newer plant displays, plating designs etc.).

References

- Bennet., E. S., and J. E. Swasey. 1996. Perceives Stress Reduction in Urban Public Gardens. *HortTechnology* 6, 125-1258.
- Chang, L., R. J. Bisgrove, M. Liao, 2008. Improving Educational Functions in Botanic Gardens by Employing Landscape Narratives. *Landscape and Urban Planning* 86; 233-247.
- Chen., B., O. A. Adimo, and Z. Bao. 2009. Assessment of Aesthetic Quality and Multiple Functions of Urban Green Space from The Users' Perspective: The case of Hangzhou Flower Garden, China. *Landscape and Urban Planning* 93; 76-82.
- Connell, J., and D. Meyer. 2004. Modelling the Visitor Experience in the Gardens of Great Britain, *Current Issues in Tourism* 7:3; 183-216.

- Crilley, G., and B. Price. 2006. Visitor Service Quality, Visitor Benefits, and Behavioural Intentions, An Empirical Investigation at an Australian Botanic Garden. In G. Barry O'Mahony and P. Whitelaw, Proceedings of the CAUTHE 2006 Conference, 'To the city and beyond'. Melbourne: Victoria University.
- Crilley, G., 2008. Visitor Service Quality Attributes at Australian Botanic Gardens: Their Use in Predicting Behavioural Intentions. *Annals of Leisure Research* 11:1-2; 20-40.
- Crilley, G., J. Hills, G. Cairncross, E. Moskwa. 2010. Identifying Visitor Service Quality in Australian Regional Botanic Gardens, *Annals of Leisure Research* 13:3; 476-496
- IUCN, 1987. The IUCN Botanic Gardens Conservation Strategy: A Summary. In: Bramwell, D., Hamann, O., Heywood, V., Synge, H. (Eds.), *Botanic Gardens and the World Conservation Strategy*. Academic Press, London.
- Kuzevanov, V., and S. Sizykh. 2006. Botanic Gardens Resources: Tangible and Intangible Aspects of Linking Biodiversity and Human Well-Being. *Hiroshima Peace Science* 28; 113-134.
- Oldfield, S., 2007. *Great Botanic Gardens of The World*. New Holland Publishers. UK.
- Var, M., 2013. Design And Usage Differences of Botanical Gardens During The Historical Process. International Scientific-Practical Conference "The Role of Botanical Gardens in Conservation of Plant Diversity" 100th Anniversary of the Batumi Botanical Garden May, 8-10 BATUM 2013.
- Ward, C.D., C. M. Parker, and C. M. Shackleton. 2010. The Use And Appreciation of Botanical Gardens as Urban Green Spaces in South Africa. *Urban Forestry and Urban Greening* 9; 49-55.
- Wyse-Jackson, P.S., L.A. Sutherland. 2000. *International Agenda for Botanic Gardens in Conservation*. Botanic Gardens Conservation International, UK, http://www.bgci.org/files/All/Key_Publications/interagendaeng_2580.pdf